

**Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services**

**STATEMENT OF BASIS**

**Utilities Plant  
Draft Renewal Part 70 Permit  
Westlake Vinyls Company, L.P.  
Geismar, Ascension Parish, Louisiana  
Agency Interest Number: 1138  
Activity Number: PER20060001  
Draft Permit 2699-V4**

**I. APPLICANT:**

**Company:**

Westlake Vinyls Company, L.P.  
P.O. Box 228, Geismar, LA 70734

**Facility:**

Geismar Plant  
36045 Highway 30, Geismar, Ascension Parish, Louisiana  
Approximate UTM coordinates are 691.83 kilometers East and 3,343.65  
kilometers North, Zone 15

**II. FACILITY AND CURRENT PERMIT STATUS:**

Borden Chemical and Plastics operated a chemicals manufacturing complex in Geismar, Louisiana. The complex included the Biological Treatment Plant, a Vinyl Chloride Monomer - Acetylene (VCM-A) plant, a Vinyl Chloride Monomer - Ethylene (VCM-E), and a Polyvinyl Chloride (PVC) plant. Geismar Vinyls Company, L.P. bought sections of the plant including the Biological Treatment Plant, VCM-E Plant, PVC Plant, and Utilities Plant on December 20, 2002. The facility changed names from GVC to Westlake Vinyls Company, L.P. on June 28, 2005.

The Utilities Plant is comprised of a steam boiler. The boiler is an Indeck, natural gas fired, water tube boiler with a rated maximum heat input of 250 MMBtu/hr, with the ability to produce up to 250,000 lbs/hr of 600 psig steam. To minimize emissions, the boiler is equipped with low NOx burners and flue gas recirculation

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Several Part 70 permits addressing portions of the facility have already been issued. These include:

<b>Permit #</b>	<b>Units or Sources</b>	<b>Date Issued</b>
1248-V2	VCM-E Plant	09/05/2007
2302-V0	EDC Storage Tanks – Tanks 7609C & 7609D	03/06/2003
2699-V3	Utilities Plant	06/28/2005
2843-V0	EDC Marine Loading Operations	08/06/2003
2872-V0	Biological Treatment Plant	07/26/2005
2874-V1	PVC Plant	09/11/2007
3057-V0	Chlor-Alkali Plant	07/03/2007

### III. PROPOSED PERMIT / PROJECT INFORMATION:

#### Proposed Permit

A permit application and Emission Inventory Questionnaire were submitted by Westlake Vinyls Company, L.P. on February 13, 2006 requesting a Part 70 operating permit renewal.

Westlake Vinyls Company requests a Part 70 Permit Renewal for the Utilities Plant. Requirements pertaining to 40 CFR 63 Subpart DDDDD are being removed since the subpart has been vacated.

#### Permitted Air Emissions

Estimated changes in permitted emissions from the Utilities Plant in tons per year are as follows:

<b>Pollutant</b>	<b>Before</b>	<b>After</b>	<b>Change</b>
PM <sub>10</sub>	8.21	8.21	-
SO <sub>2</sub>	0.65	0.65	-
NO <sub>x</sub>	109.50	109.50	-
CO	90.20	90.20	-
VOC	5.90	5.90	-

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VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Before	After	Change
Formaldehyde	0.10	0.10	-
Hexane (n-)	1.93	1.93	-
Toluene	0.004	0.004	-
Total	2.034	2.034	-

**Prevention of Significant Deterioration Applicability**

This plant is not being modified; therefore, PSD does not apply.

This application was reviewed for compliance with the Louisiana Preconstruction and Part 70 operating permit program. It was also reviewed for compliance with Louisiana Air Quality Regulations, NSPS, and NESHAP. Prevention of Significant Deterioration (PSD) does not apply.

**Non-attainment New Source Review (NNSR)**

The Utilities Plant is located in a severe non-attainment area for ozone where VOC and NO<sub>x</sub> are regulated. The Utilities Plant is an existing source, which is not being modified; therefore, NNSR does not apply.

**MACT requirements**

The Utilities Plant utilizes a Group 1 Fossil Fuel as fuel for the boiler. Therefore, MACT requirements do not apply.

**Air Modeling Analysis**

Dispersion Model(s) Used: N/A

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Air Quality Standard (NAAQS)

Impact on air quality from Utilities Plant will be below the National Ambient Air Quality Standards (NAAQS) and the Louisiana Ambient Air Standards (AAS) beyond industrial property.

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**General Condition XVII Activities**

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to General Condition XVII section, section VIII, of the draft Part 70 permit.

**Insignificant Activities**

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Insignificant Activities section, section IX, of the draft Part 70 permit.

**IV. Permit Shields**

Not applicable.

**V. Periodic Monitoring**

The boiler is monitored in accordance with 40 CFR 60 Subpart Db.

<b>VI. Applicability and Exemptions of Selected Subject Items</b>		
<b>ID No:</b>	<b>Requirement</b>	<b>Notes</b>
EQT 26 (03-04 Steam Boiler)	NSPS Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units – Standard for Sulfur Dioxide and Particulate Matter [40 CFR 60.42b and 40.43b]	DOES NOT APPLY – No coal or oil used as fuel.
	Chapter 15 – Emission Standards for Sulfur Dioxide [LAC 33:III.1503]	DOES NOT APPLY - Chapter 15 requirements do not apply to single point sources that emit or have the potential to emit less than 5 tons per year of Sulfur Dioxide as per LAC 33:III.1502.3.

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<b>ID No:</b>	<b>Requirement</b>	<b>Notes</b>
EQT 26 (03-04 Steam Boiler) Continued	Chapter 22 – Control of Emissions of Nitrogen Oxides (NO <sub>x</sub> ) [LAC 33:III.2201]	EXEMPT – per LAC 33:III.2201.C.15 (affected point source subject to more stringent federal NO <sub>x</sub> emission limitation. Boiler subject to 40 CFR 60 Subpart Db.)
	Chapter 51 – Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.5105.B]	EXEMPT – per LAC 33:III.5105.B.3.a (Group 1 virgin fossil fuels – natural gas used as fuel for boiler)

<b>VII. Streamlined Requirements</b>			
<b>Unit or Plant Site</b>	<b>Programs Being Streamlined</b>	<b>Stream Applicability</b>	<b>Overall Most Stringent Program</b>
N/A			

## VIII. Glossary

**Best Available Control Technologies (BACT)** - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

**CAM** - Compliance Assurance Monitoring rule – A federal air regulation under 40 CFR Part 64

**Carbon Black** - A black colloidal substance consisting wholly or principally of amorphous carbon and used to make pigments and ink.

**Carbon Monoxide (CO)** – (Carbon monoxide) a colorless, odorless gas produced by incomplete combustion of any carbonaceous (gasoline, natural gas, coal, oil, etc.) material.

**Cooling Tower** – A cooling system used in industry to cool hot water (by partial evaporation) before reusing it as a coolant.

**Continuous Emission Monitoring System (CEMS)** – The total combined equipment and systems required to continuously determine air contaminants and diluent gas concentrations and/or mass emission rate of a source effluent.

**Cyclone** – A control device that uses centrifugal force to separate particulate matter from the carrier gas stream.

**Duct Burner** – A device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

**Federally Enforceable Specific Condition** - A federally enforceable specific condition written to limit the potential to Emit (PTE) of a source that is permanent, quantifiable, and practically enforceable. In order to meet these requirements, the draft permit containing the federally enforceable specific condition must be placed on public notice and include the following conditions:

- A clear statement of the operational limitation or condition which limits the source's potential to emit;
- Recordkeeping requirements related to the operational limitation or condition;
- A requirement that these records be made available for inspection by LDEQ personnel;
- A requirement to report for the previous calendar year.

**Grandfathered Status**- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

**Heat Recovery Steam Generator (HRSG)** – A steam generator that recovers exhaust heat from a gas turbine, and provides economizing and steam generation surfaces.

**Hydrogen Sulfide (H<sub>2</sub>S)** - A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the action of acids on metallic sulfides, and is an important chemical reagent.

**Maximum Achievable Control Technology (MACT)** - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

**NESHAP** - National Emission Standards for Hazardous Air Pollutants –Air emission standards for specific types of facilities, as outlined in 40 CFR Parts 61 through 63

**Nitrogen Oxides (NO<sub>x</sub>)** - Compounds whose molecules consists of nitrogen and oxygen.

**Nonattainment New Source Review (NNSR)** - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

**NSPS** - New Source Performance Standards – Air emission standards for specific types of facilities, as outlined in 40 CFR Part 60

**Organic Compound** - Any compound of carbon and another element. Examples: Methane (CH<sub>4</sub>), Ethane (C<sub>2</sub>H<sub>6</sub>), Carbon Disulfide (CS<sub>2</sub>)

**Part 70 Operating Permit**- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit:  $\geq 10$  tons per year of any toxic air pollutant;  $\geq 25$  tons of total toxic air pollutants; and  $\geq 100$  tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

**PM<sub>10</sub>**- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

**Potential to Emit (PTE)** - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

**Prevention of Significant Deterioration (PSD)** – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

**Selective Catalytic Reduction (SCR)** – A noncombustion control technology that destroys NO<sub>x</sub> by injecting a reducing agent (e.g., ammonia) into the flue gas that, in the presence of a catalyst (e.g., vanadium, titanium, or zeolite), converts NO<sub>x</sub> into molecular nitrogen and water.

**Sulfur Dioxide (SO<sub>2</sub>)** – An oxide of sulfur.

**TAP** - Toxic Air Pollutant (LDEQ acronym for air pollutants regulated under LAC 33 Part III, Chapter 51, Tables 1 through 3).

**Title V permit** – See Part 70 Operating Permit.

**“Top Down” approach** – An approach which requires use of the most stringent control technology found to be technically feasible and appropriate based on environmental, energy, economic, and cost impacts.

**Turbine** – A rotary engine in which the kinetic energy of a moving fluid is converted into mechanical energy by causing a bladed rotor to rotate.

**Volatile Organic Compound (VOC)** - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.